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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,441

07/20/2005

Ding Yuan

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45473 7590 04/30/2008  
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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,441	<b>Applicant(s)</b> YUAN ET AL.	
	<b>Examiner</b> John J. Zimmerman	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 7 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/10/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20080218</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **SECOND OFFICE ACTION**

### ***Amendments***

1. This Second Office Action is in response to the correspondence titled "AMENDMENT" received February 18, 2008. Claims 1, 3, 4, 7 and 13 are pending in this application

### ***Information Disclosure Statement***

2. The "INFORMATION DISCLOSURE STATEMENT" received February 18, 2008 has been considered. An initialed form PTO-1449 is enclosed with this Second Office Action.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-4, 7 and 13 are rejected under 35 U.S.C. 103(a) as obvious over Tanaka (JP 50-8979).

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5. Tanaka (JP 50-8979) discloses coating Ti, Ti alloy or Ti hydride powder with Ni to form a Ni-Ti series alloy containing between 45-65 at.% Ni with the balance Ti (see document and translation of the document; translation of claim 1). While Tanaka may not require the Ni:Ti atomic ratio to be between 0.9 and 1.1 (e.g. claim 1, lines 2-3), this ratio would occur directly in Tanaka's disclosed range (e.g. roughly between 47-53 at.% Ni remainder Ti). Therefore, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 USPQ 549. Tanaka may differ from the method recitations of some of the rejected product claims in that Tanaka may not use the same methods described in the claims (e.g. see claim 7). The rejected claims, however are product claims and when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113. Tanaka may also differ from claim 7 in that the coated powder is intended for spraying instead of sintering, but there is no factual evidence of record that sprayed coatings are patentably distinct from sintered coatings. There is no

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patentable distinction between a sintered composition such as that in claim 7 and a flame sprayed composition such as Tanaka's. Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

### ***Response to Arguments***

6. Applicant's arguments and amendments filed February 18, 2008 have been fully considered and have removed most of the rejections made in the First Office Action but they are not persuasive with regards to the remaining rejection under 35 U.S.C. 103(a) over Tanaka (JP 50-8979). As noted above, Tanaka (JP 50-8979) discloses coating Ti, Ti alloy or Ti hydride powder with Ni to form a Ni-Ti series alloy containing between 45-65 at.% Ni with the balance Ti (see document and translation of the document; translation of claim 1). While Tanaka may not require the Ni:Ti atomic ratio to be between 0.9 and 1.1 (e.g. claim 1, lines 2-3), this ratio would occur directly in Tanaka's disclosed range (e.g. roughly between 47-53 at.% Ni remainder Ti). Therefore, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie*

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case of obviousness, see *In re Malagari*, 182 USPQ 549. Applicant argues that the "use of Ni coated Ti powders characterized by a Ni:Ti atomic ratio of between 0.9 and 1.1 avoids the formation of secondary phases and yields an alloy with better mechanical properties" (e.g. see page 4 of applicant's response). A review of applicant's disclosure, however, shows no factual results in favor of patentable distinction for the Ni:Ti ratio between 0.9 and 1.1 over any other Ni:Ti ratio that would be obvious from the teachings of Tanaka. Mere attorney arguments and conclusory statements in the specification, unsupported by objective evidence, are insufficient to establish unexpected results, *In re Wood, Whittaker, Stirling, and Ohta*, 199 USPQ 137 (CCPA 1978). Applicant also argues that Tanaka "further discloses the use of powder with a titanium alloy core or titanium hydride core in contrast to the titanium core as set forth in the claims" (e.g. see page 5 of applicant's response). Applicant is directed to page 6 of the translation of Tanaka which clearly shows Sample 1 using Ti powder as the nucleus coated with Ni. In addition, the translation of claim 1 of Tanaka clearly shows that a Ti core may be used alternatively to a Ti alloy core or a core of their hydrides. Regarding applicant's argument that the "currently pending claims are directed to powders or sintered bodies, not films" (e.g. see page 6 of applicant's response), Tanaka clearly discloses that his invention is a Ni coated Ti core powder. Regarding applicant's claim 7, there is no factual evidence of record that sprayed coatings are patentably distinct from sintered bodies. The recitation of a "sintered body" adds no further structure that can be said to distinguish over a flame sprayed coating. A "sintered body" does not require any particular dimensions that would distinguish over a coating. Therefore, barring evidence to the contrary, there is no patentable distinction between a sintered composition such as that in claim 7 and a flame sprayed composition such as Tanaka's. Patent and Trademark Office can require

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applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Rena Dye can be

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reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John J. Zimmerman  
Primary Examiner  
Art Unit 1794

/John J. Zimmerman/  
Primary Examiner, Art Unit 1794

jjz  
April 24, 2008